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CLAIMS

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[Claim(s)]

[Claim 1] While being able to create image data newly for a storage means to memorize one or more image data, and this storage means The image-processing means which can be edited, and a display means by which an image-processing means displays image data, A transfer means to transmit the image data of an external information processor to this storage means, In the personal digital assistant equipped with a judgment means by which the image data of this storage means judges whether it is the image data which the image-processing means created, or it is the image data transmitted from the external information processor, and outputs a judgment result An image-processing means is the personal digital assistant characterized by changing processing by the judgment result of this judgment means.

[Claim 2] It is the personal digital assistant characterized by determining whether an image-processing means changes data format by the judgment result of this judgment means in a personal digital assistant according to claim 1, or changing a screen display.

[Claim 3] With reference to the file name of the image data which memorizes a judgment means for said storage means in a personal digital assistant according to claim 1, it is the personal digital assistant characterized by outputting a judgment result.

[Claim 4] It is the personal digital assistant which the file name of the image data memorized for said storage means is determined in a personal digital assistant according to claim 1 in relation to the time by which image data was created, or the serial number, and is characterized by an image-processing means displaying the day entry acquired from a file name by the display means, or the serial number.

[Claim 5] The personal digital assistant which is equipped with a setting means to set up whether a day entry is displayed in a personal digital assistant according to claim 4, and is characterized by an operator determining a display or un-displaying for a day entry with this setting means.

[Claim 6] The personal digital assistant which is equipped with a setting means to set up the location on the screen which displays a day entry in a personal digital assistant according to claim 4, and is characterized by determining the location on the screen where an operator displays a day entry with this setting means.

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] It connects with other information processors and is related with the approach at the time of displaying in detail the data inputted from other information processors with a personal digital assistant about the personal digital assistant which can perform I/O of data.

[0002]

[Description of the Prior Art] The miniaturization of a computer progresses and the computer which it is small and can be carried has spread. Since the pocket mold computer is made on the assumption that it can carry and do, it is small size compared with the computer used on a desk. The pocket mold computer is equipped with the keyboard small for a data input, or the tablet, and is equipped with the liquid crystal display for data display. The example of the general-view Fig. of the common pocket mold computer to drawing 1 is shown. The example of drawing 1 is an example equipped with the small keyboard and the liquid crystal display on which the tablet was put. Since a pocket mold computer is the magnitude which can manage data, such as a schedule and a telephone directory, electronically, and can be carried, refer to the data also for a migration place. Hereafter, the computer of a pocket mold is called a "personal digital assistant." In the personal digital assistant equipped with a tablet like the example of drawing 1, an operator can perform the function by directing directly the icon displayed on the liquid crystal screen with an attached pen and an attached finger. Moreover, there are some personal digital assistants which can take a handwriting memorandum using a tablet. Drawing 2 is drawing showing the example of a screen of a handwriting memorandum. As shown in drawing and the operator traced the paper top with the pencil when he dragged the liquid crystal screen top with the pen, the locus of a pen is displayed on a liquid crystal screen. As image data, the memorandum written by hand is memorized by the storage means in a personal digital assistant, when an operator is required, it can be read, and it can be used. [0003] RS-232C for on the other hand exchanging other computers and data mutually to a personal digital assistant (trademark) There is a thing equipped with connecting means, such as serial connection and infrared connection. By the connecting means, I/O of data can be performed in the computer and personal digital assistant which are used usually. At the example of drawing 1, it is RS-232C. It is the example equipped with serial connection. Since the personal digital assistant equipped with the connecting means is easy to carry and an exchange of data with a desk top computer is also easy for it, the function which displays the data which incorporated the data of a desk top computer to the personal digital assistant, and were incorporated at the going-out place is used frequently.

[0004]

[Problem(s) to be Solved by the Invention] However, there was a case where data could not be carried in the program by the side of a personal digital assistant even if the operating systems used may differ and it transmits data for the data of a desk top computer to a personal digital assistant when data format differs in a desk top computer and a personal digital assistant.

[0005] In order to solve this, transposition with data is taken in the data format of image data, the data of a desk top computer are changed into image data, and it transmits to a personal digital assistant as image

data. That is, the information on a desk top computer is displayed on the screen of a desk top computer, and the hard copy of a screen is saved as image data. And if image data is transmitted to a personal digital assistant, a personal digital assistant can also refer to the screen data of a desk top computer, and it will mean that it had transmitted almost equal information. Thereby, a personal digital assistant can refer the information on the screen of a desk top computer.

[0006] However, each is transmitted as one file and the transmitted image data is scatteringly saved within a personal digital assistant. For this reason, when it was going to refer to the image data which the operator transmitted, the contents of that image data had to be guessed from the file name, and in order to discover desired image data, time amount and time and effort were needed. Thus, the image data of a desk top computer is incorporated to a personal digital assistant, and it aims at mitigating the activity produced when an operator referred to data.

[0007]

[Means for Solving the Problem] While being able to create image data newly in this invention for a storage means to memorize one or more image data, and this storage means The image-processing means which can be edited, and a display means by which an image-processing means displays image data, A transfer means to transmit the image data of an external information processor to this storage means, [ whether the image data of this storage means is image data which the image-processing means created, and ] It judges whether it is the image data transmitted from the external information processor, and has a judgment means to output a judgment result. An image-processing means When image data other than handwriting MEMODETA is in this storage means with reference to the judgment result of this judgment means, it changes into the form which can be treated by the handwriting memo pad program, treats like a handwriting memorandum, and can be made to perform display/edit.

[0008] Thereby, an operator needs to distinguish the inputted handwriting data and the image data transmitted from the desk top computer, does not need to deal with it, and he can refer to by the same actuation.

[0009]

[Embodiment of the Invention] Hereafter, the example of this invention is explained using a drawing.

[0010] Drawing 1 is the general-view perspective view of the personal digital assistant of this invention. 101 is a keyboard for a data input, 102 is a liquid crystal screen for data display, and the tablet is piled up on liquid crystal. As for a pen for 103 to direct a tablet and 104, an electric power switch and 105 are connecting means with a desk top computer.

[0011] In the personal digital assistant equipped with a tablet like the example of drawing 1, an operator can perform the function by directing directly the icon displayed on the liquid crystal screen with an attached pen and an attached finger. In detail, a tablet detects the coordinate he was instructed to be when the operator directed the icon of a liquid crystal screen first. When the directed coordinate and the coordinate of the icon displayed on liquid crystal are in agreement, it is the procedure of performing the function of an icon.

[0012] Moreover, in this invention, a handwriting memorandum can be taken using the tablet of a personal digital assistant. When the operator dragged the liquid crystal screen top with the pen, as he traced the paper top with the pencil like drawing 2, the locus of a pen is displayed on a liquid crystal screen. In detail, if an operator drags a liquid crystal screen first, a tablet will detect the dragged coordinate. By displaying the liquid crystal pixel of the directed coordinate by the background color and different color, it is the procedure of displaying a locus on a liquid crystal screen.

[0013] Drawing 2 is drawing showing the "edit display" immediately after starting of a handwriting memo pad program. The "memorandum viewing area" as which 201 edits or displays a handwriting memorandum, and 202 The "new carbon button" which starts the function which creates one memorandum newly, and 203 The "deletion carbon button" which starts the function to delete one memorandum, and 204 The "front page carbon button" which starts the function which displays the page before a memorandum, and 205 The "list carbon button" which starts the function in which the "following page carbon button" which starts the function which displays the next page of a memorandum, and 206 display the list of memoranda, and 207 are the "termination carbon buttons" for

ending a handwriting memo pad program. An operator creates one memorandum of a blank paper with a "new carbon button", and fills in a memorandum by directing the memorandum viewing area of 201 directly with a pen. A "front page carbon button" is directed to see a pre- memorandum, and the "following page carbon button" is directed to see the next memorandum. If a "list carbon button" is directed, as shown in drawing 3 , a handwriting memorandum will be reduced and it will indicate by list.

[0014] Drawing 3 is a "list screen" displayed by directions of a "list carbon button." 301 is the memo pad which reduced the "memorandum viewing area" to one half per side. Since the four sheets are indicated by list on one screen, the outline of a memorandum can be grasped on this screen. 302 is a "front page carbon button" and displays four front sheets in the list of a memorandum. 303 is the "following page carbon button" and displays the following four sheets in the list of a memorandum. [0015] 304 is the "date display" which displayed the date by which the memorandum was created. The date display displays the date by which the memorandum was created. The handwriting tickler file is saved in the data saved area 503, and one memorandum is saved as one file. File names are [ A.D. / of the created date ] double figures and the figure of the triple figures serial number which united and put 11 figures in order about double figures and a day in 4 figures and the moon. For example, if it is the memorandum created by the 1st on December 11, 1997, the file name of the memorandum is "19971211001." When two or more memoranda are created by the same date, every [ 1 ], the serial number becomes large and is created.

[0016] If there is a file expressed with 11 digits, it judges that it is data of a handwriting memorandum, and like drawing 3 , 4 figures, a tooth space, double figures, a tooth space, double figures, a tooth space, and triple figures and a figure will be divided, and it will display legible. Moreover, if there is a file which is not expressed with 11 digits, it will judge that they are data other than the data of a handwriting memorandum (that is, data transmitted from the desk top computer), and a file name will be displayed as it is, without inserting a tooth space (in drawing 3 , lower right "MapOfTown" is the example). Moreover, by handwriting MEMODETA which handwriting MEMOPUROGURAMU created, and the data transmitted from the desk top computer, when data format differs, data conversion is performed.

[0017] In addition, in this example, although the data of a handwriting memorandum were distinguished using the file name, management information may be recorded as another file. Moreover, in a list screen, an operator sets up whether the date is displayed and or not where a display position is carried out again with a user setting screen like drawing 9 .

[0018] In a reduced screen, when it is necessary to look small or to edit, an operator can choose a desired memorandum from this screen, and can move to the screen of

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TECHNICAL FIELD

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[Field of the Invention] It connects with other information processors and is related with the approach at the time of displaying in detail the data inputted from other information processors with a personal digital assistant about the personal digital assistant which can perform I/O of data.

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PRIOR ART

[Description of the Prior Art] The miniaturization of a computer progresses and the computer which it is small and can be carried has spread. Since the pocket mold computer is made on the assumption that it can carry and do, it is small size compared with the computer used on a desk. The pocket mold computer is equipped with the keyboard small for a data input, or the tablet, and is equipped with the liquid crystal display for data display. The example of the general-view Fig. of the common pocket mold computer to drawing 1 is shown. The example of drawing 1 is an example equipped with the small keyboard and the liquid crystal display on which the tablet was put. Since a pocket mold computer is the magnitude which can manage data, such as a schedule and a telephone directory, electronically, and can be carried, refer to the data also for a migration place. Hereafter, the computer of a pocket mold is called a "personal digital assistant." In the personal digital assistant equipped with a tablet like the example of drawing 1, an operator can perform the function by directing directly the icon displayed on the liquid crystal screen with an attached pen and an attached finger. Moreover, there are some personal digital assistants which can take a handwriting memorandum using a tablet. Drawing 2 is drawing showing the example of a screen of a handwriting memorandum. As shown in drawing and the operator traced the paper top with the pencil when he dragged the liquid crystal screen top with the pen, the locus of a pen is displayed on a liquid crystal screen. As image data, the memorandum written by hand is memorized by the storage means in a personal digital assistant, when an operator is required, it can be read, and it can be used. [0003] RS-232C for on the other hand exchanging other computers and data mutually to a personal digital assistant (trademark) There is a thing equipped with connecting means, such as serial connection and infrared connection. By the connecting means, I/O of data can be performed in the computer and personal digital assistant which are used usually. At the example of drawing 1, it is RS-232C. It is the example equipped with serial connection. Since the personal digital assistant equipped with the connecting means is easy to carry and an exchange of data with a desk top computer is also easy for it, the function which displays the data which incorporated the data of a desk top computer to the personal digital assistant, and were incorporated at the going-out place is used frequently.

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EFFECT OF THE INVENTION

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[Effect of the Invention] The image data of a desk top computer is incorporated to a personal digital assistant, and it aims at mitigating the activity produced when an operator referred to data.

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TECHNICAL PROBLEM

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MEANS

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] It is the general-view Fig. of the personal digital assistant which is the example of this invention.

[Drawing 2] It is drawing showing the example of a screen of handwriting MEMOPUROGURAMU.

[Drawing 3] It is drawing showing the example of a screen of handwriting MEMOPUROGURAMU.

[Drawing 4] It is the basic block diagram of the personal digital assistant of this invention.

[Drawing 5] It is drawing showing the information memorized for the storage means of drawing 4 .

[Drawing 6] It is drawing showing a processing flow.

[Drawing 7] It is drawing showing a processing flow.

[Drawing 8] It is drawing showing a processing flow.

[Drawing 9] It is drawing showing the example of a screen of handwriting MEMOPUROGURAMU.

[Description of Notations]

101 [ -- An electric power switch, 105 / -- Connecting means. ] -- A keyboard, 102 -- A liquid crystal screen, 103 -- A pen, 104

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[Translation done.]

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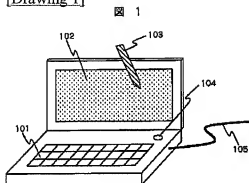
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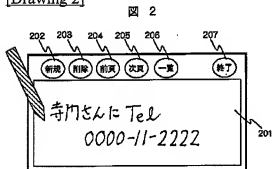
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DRAWINGS

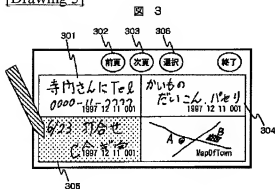
[Drawing 1]



[Drawing 2]

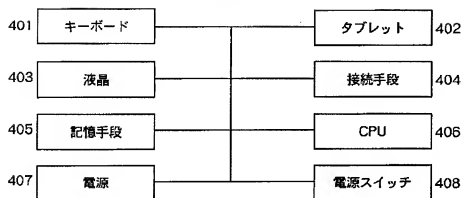


[Drawing 3]



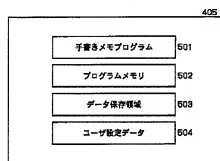
[Drawing 4]

図 4



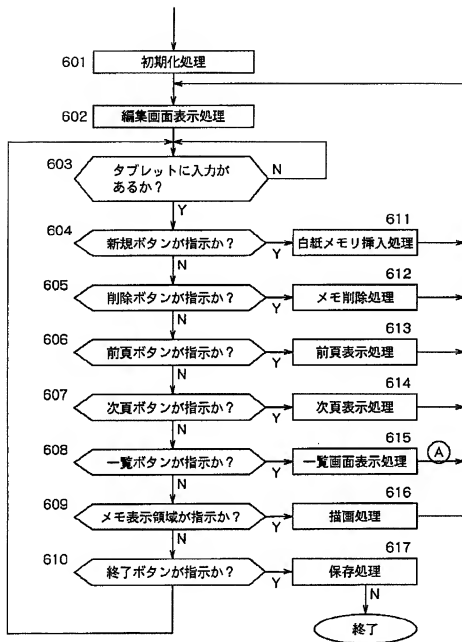
[Drawing 5]

図 5



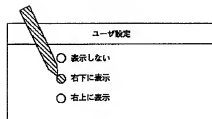
[Drawing 6]

図 6



[Drawing 9]

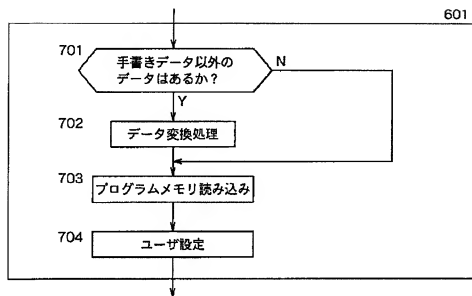
図 9



[Drawing 7]

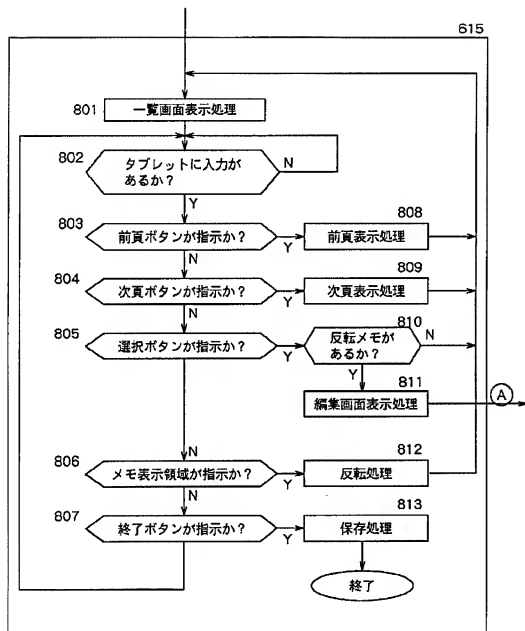
図 7

601



[Drawing 8]

図 8



[Translation done.]